

CLAIMS:

1. Method of controlling the charging of a vehicle battery, wherein
  - the vehicle battery is connected with a generator,
  - the generator supplies an electric on-board power supply of a motor vehicle and an additional consuming device with electric power, and
  - the generator supplying the additional consuming device with electric power only when the power requirement of the on-board power supply has been met, wherein the supplying of the additional consuming device and the charging of the vehicle battery are controlled in that
    - when the power demand of the additional consuming device is not fully met,
    - when it is determined that a charging current, which flows from the generator into the vehicle battery, is higher than a limit value, and
    - when the generator power additionally permits the supplying of the additional consuming device, the additional consuming device is supplied with power by the generator and the charging current is adjusted such that it is lower than the maximally possible charging current while the generator power and the power demand of the on-board power supply are the same.
2. Method according to Claim 1,

wherein the additional consuming device is not supplied with electric power by the generator when the charging current is lower than the limit value.

3. Method according to Claim 1,  
wherein the charging current is controlled to the limit value when the additional consuming device is supplied with power by the generator.

4. Method according to Claim 1,  
wherein the limit value of the charging current is changed as a function of at least one variable, particularly as a function of the vehicle battery temperature and/or of the battery charging condition.

5. Method according to Claim 1,  
wherein a charging condition of the vehicle battery is detected and wherein it is permitted that the charging current falls under the limit value and/or that the vehicle battery is discharged when a supply demand of the consuming device exists and when the charging condition reaches a high level, particularly when a measurement for the charging condition is higher than or at least equal to a defined minimal value.

6. System for controlling the charging of a vehicle battery, having  
- a control element for adjusting a charging current, by

means of which a generator charges the vehicle battery (1),

- a detection device for detecting whether the charging current exceeds a limit value, and

- a control unit which is connected with the detection device and the control element and which has a connection for receiving a demand signal which signals an electric supply demand of an additional consuming device connected to the generator,

wherein the system is further developed such that, in the case of a supply demand of the additional heater, the charging current can be adjusted such by the control element that it is lower than the maximally possible charging current while the generator power and the power demand of other consuming device connected to the generator are the same.

7. System according to Claim 6, having

- a detection device for detecting the charging condition of the vehicle battery which is connected with the vehicle battery and which is also connected with the control unit,

wherein the control unit is further developed such that it controls the charging of the vehicle battery as a function of a detection signal of the detection device.

8. A method of controlling a charging of a battery in a vehicle including a generator for charging the battery and for supplying electric power to an on-board power supply and

an additional consuming device, the method comprising:

supplying electric power to the additional consuming device by the generator only when the electric power supplied to the on-board power supply is at or above an electric power threshold; and

controlling the supplying of electric power to the additional consuming device and the charging of the vehicle battery if:

the power demand of the additional consuming device is below a power threshold;

it is determined that a charging current, which flows from the generator into the battery, is higher than a limit value; and

the generator power additionally permits the supplying of the additional consuming device.

9. The method according to claim 8, wherein the additional consuming device is supplied with power by the generator and the charging current is adjusted such that it is lower than a current threshold.

10. Method according to Claim 8,  
wherein the additional consuming device is not supplied with electric power by the generator when the charging current is lower than the limit value.

11. Method according to Claim 8, wherein the charging

current is controlled to the limit value when the additional consuming device is supplied with power by the generator.

12. Method according to Claim 8, wherein the limit value of the charging current is changed as a function of at least one variable, particularly as a function of the vehicle battery temperature and/or of the battery charging condition.

13. Method according to Claim 8, wherein a charging condition of the vehicle battery is detected and wherein it is permitted that the charging current falls under the limit value and/or that the vehicle battery is discharged when a supply demand of the consuming device exists and when the charging condition reaches a high level, particularly when a measurement for the charging condition is higher than or at least equal to a defined minimal value.